

June 13, 2002

PUBLIC UTILITIES COMMISSION
Interim Electric Energy Conservation Programs

ORDER ESTABLISHING
INTERIM CONSERVATION
PROGRAMS

WELCH, Chairman; NUGENT and DIAMOND, Commissioners

I. SUMMARY

By this Order, we establish the cost effectiveness tests, objectives and other criteria that we use and will continue to use to choose interim electric energy conservation programs. We decide to immediately implement the following as interim programs:

- Low-income refrigerator replacement program
- Building Operator Certification (BOC) program
- State building program
- Department of Economic and Community Development (DECD) conservation loan capitalization
- Maine Energy Education Program (MEEP) funding
- Maine energy curriculum investigation

We also decide to implement the following programs after developing additional program design details:

- Residential energy efficient lighting program
- New school construction program

Finally, we decide to further investigate the following programs that show potential for meeting our criteria for interim programs:

- Small business prescriptive rebate program
- Low-income no-charge lighting program
- Large commercial/industrial (C/I) program

II. BACKGROUND

P.L. 2001, ch. 624 (the Conservation Act),¹ enacted during the second session of the 120th Legislature, establishes terms that govern an electric energy conservation

¹ The Conservation Act is contained in Appendix A.

program in Maine. Section 4 of ch. 624 directs the Maine Public Utilities Commission (Commission) to develop and implement electric energy conservation programs that are consistent with the goals and objectives of an overall energy conservation program strategy that the Commission must establish. The programs must be cost effective, according to a definition that the Commission also must establish. Various other statutory directives require the Commission to promulgate rules and hold public hearings.

Recognizing that the process of implementing electric energy conservation programs will necessarily take many months, the Legislature authorized the Commission to implement interim programs. Section 7 of ch. 624 states:

Interim programs. In order to avoid a significant delay in the implementation of conservation programs pursuant to the Maine Revised Statutes, Title 35-A, Section 3211-A, the Public Utilities Commission may use funds from the conservation program fund established pursuant to Title 35-A, section 3211-A, subsection 5 to implement on a short-term basis conservation programs that the commission finds to be cost effective. The commission is not required to satisfy the requirements of Title 35-A, section 3211-A before implementing such programs. Any programs implemented under this section must terminate no later than December 31, 2003. Funds in the conservation program fund not used for short-term programs under this section must be used in accordance with Title 35-A, section 3211-A.

The Commission intends to implement interim programs during the summer of 2002. We expect to begin implementing longer term programs during 2003.

By Proposed Order on April 26, 2002, we stated our preliminary views on interim program goals, cost effectiveness tests for interim programs, interim program candidates, and the decision making process that the Commission will use when selecting and implementing interim programs. We held a public hearing on May 10, 2002 so that interested persons could comment on the Proposed Order and other matters concerning interim programs. We also invited written comments on the Proposed Order, which were due by May 17, 2002.

In Appendix B attached to this Order, we list the persons who spoke at the public hearing and who filed written comments. Comments at the public hearing were transcribed. Written comments filed with the Commission are available from the virtual docket at the Commission's web site (www.state.me.us/mpuc). The transcription of the public hearing is also available.² We discuss these comments throughout the body of this Order. Suggestions for specific interim programs are discussed in the program section of the Order.

² See our web site, under the "Electric Conservation Activity" section.

III. BASIS FOR APPROVING INTERIM CONSERVATION PROGRAMS

The Conservation Act requires that the Commission only implement interim programs that it finds cost effective.³ In implementing section 7 of the Act, we seek to answer three broad questions: (1) how will we evaluate the cost effectiveness of specific interim programs, (2) to what extent should we consider the provisions of newly-enacted 35-A M.R.S.A. § 3211-A (section 4 of the Act) when approving interim programs, and 3) are there other criteria to consider?

A. Cost Effectiveness

1. Appropriate tests

Cost effectiveness testing for conservation programs has a long history before this Commission. For example, the Electric Rate Reform Act stated 25 years ago that

The Commission, as it determines appropriate, shall order electric public utilities to submit specific rate design proposals and related programs for implementing energy conservation techniques and innovations ... Such proposals shall, as the Commission determines, be designed to encourage energy conservation, minimize the need for new electrical generating capacity, and minimize the costs of electricity to consumers... (Public Laws, 1977, Chapter 521).

Thus, we have spent the last twenty-five years considering, and periodically reconsidering, how to test whether proposed conservation measures are likely to minimize electricity (and sometimes other) costs. The debate typically is framed in terms of which of various cost effectiveness tests should be applied. That debate is generally reducible to a debate over our goals in adopting conservation programs.

Our last thorough review of this question was in 1988, when we adopted amendments to Chapter 380, Demand Side Energy Management Programs by Electric Utilities, (Docket No. 88-178).⁴ When considering the cost effectiveness of interim conservation programs, we propose to use the cost effectiveness framework established in the original Chapter 380 (Ch. 380-O).

³ A program cannot definitively be found cost effective until after it has been in operation for some period of time and an evaluation has been performed. We interpret the Act's requirement to require that we determine that an interim program is highly likely to be cost effective.

⁴ This version of the rule was replaced in 1999 with a new version reflecting the provisions of 35-A MRSA §3211, which assigned many of the responsibilities for conservation programs to the State Planning Office. The Conservation Act repeals §3211 and returns responsibility for conservation programs to the Commission.

Ch. 380-O defined three cost effectiveness tests, but principally relied upon the “All Ratepayers Test.” This test measures whether a proposed conservation program provides the same level of end use amenity (e.g. lighting or hot water) at a lower overall net cost to utilities and ratepayers taken together.

The second cost effectiveness test in Ch. 380-O was the “Rate Impact Test.” This test measures the impact of a conservation program on the overall average rate of the electric utility (in \$ per kWh) rather than the total dollar cost. This is a stricter test than the All Ratepayers Test. A decline in electricity use, from a conservation program or for some other purpose, will tend to reduce the utility’s profit, to the extent the reduction in revenue from lower sales is greater than the utility’s savings from lower sales. At the present time, with utilities limited to the transmission and distribution (T&D) business and continuing to carry substantial stranded costs in their rates, it is unlikely that many conservation programs will pass the Rate Impact Test.⁵

The third cost effectiveness test in Ch. 380-O was the Societal Test, which included all elements of the All Ratepayers Test as well as “environmental benefits and any other social benefits external to the transaction between the utilities and its customers.”

Ch. 380-O provided for automatic approval of any programs that passed both the All Ratepayers Test and the Rate Impact Test and for programs that passed the All Ratepayers Test and did not have a significant (defined as one percent) impact on the average rate per kWh. There was no indication in Ch. 380-O of how, if at all, the Societal Test should be employed in analyzing conservation programs.

For purposes of determining the cost effectiveness of interim conservation programs, we will utilize the framework established in Ch. 380-O. We will rely primarily on the All Ratepayers Test to screen for cost effectiveness but will also consider whether conservation programs, or groups of programs, are likely to have a significant impact on rates.⁶ In addition, just as Ch. 380-O provided the Commission with flexibility to approve programs that did not meet these thresholds, we will not automatically reject programs that fail to meet either or both of these tests if there is sufficient evidence that the programs are likely to prove cost effective by some other reasonable measure. For example, we might approve an interim program that targets specific ratepayer populations or a pilot program that aids in gathering information to develop future conservation programs or lays a foundation that promises to enhance program effectiveness over time.

⁵ The exception here may be conservation programs which are primarily focused on use during on-peak periods.

⁶ Under alternative rate plans, some utilities’ rates would not be affected immediately, if at all.

2. Comments on the Proposed Order

Two parties, CMP and the Residential/Small Commercial Service Providers Coalition (the Coalition), provided comments that were almost diametrically opposed. CMP argued that we should rely upon the Rate Impact Test on the grounds that conservation funding was being recovered through a surcharge on electric rates. The Coalition argued that we should retain the All Ratepayers Test but consider the avoided cost to be the avoided cost to the individual ratepayer (i.e., the electricity rate) rather than avoided (or marginal) costs of generating and consuming less electricity.

We believe that the most appropriate approach to cost benefit determinations is to consider whether the total cost to society would be lower if a particular conservation action is taken. Adopting CMP's suggestion of the Rate Impact Test would result in our rejecting conservation measures which produce a net decrease in total costs. Thus, we will not accept CMP's suggested use of the Rate Impact Test. Similarly, we will reject the Coalition suggestion to use retail rates as avoided costs. The Coalition recommendation could, and probably would, have us approving conservation programs which raise overall costs. This would occur whenever the savings to an individual ratepayer would come only at the expense of imposing additional costs on other ratepayers which exceeded the savings to the participants.

Another, perhaps simpler, way of stating this issue is to compare two hypothetical cases. Each case focuses on a conservation measure which results in lower costs to the participant in the conservation program. In the first, the participant saves \$100 while other ratepayers incur a cost of \$50. CMP would have us reject this program because the \$50 loss would violate the Rate Impact Test. In the second case, the \$100 savings yields a \$150 loss to other ratepayers. The Coalition would have us approve the program because the participant would save \$100. Under the All Ratepayers Test, we would approve the first program, since the gain to the participant is greater than the loss to others, but we would reject the second program since it would result in a net loss. We believe this to be the right outcome and will rely primarily on the All Ratepayers Test.

In addition, Glenn Reed of NEEP offered two recommendations regarding cost effectiveness. First, Mr. Reed suggested that we analyze cost effectiveness on a multi-year basis to reflect the fact that a program may be beneficial over its entire lifetime even if it were not cost effective in one or more individual years. Here, we agree with Mr. Reed in concept, but note that all of the cost effectiveness tests should take a multiyear perspective while discounting future benefits relative to immediate benefits. This is, and has been, a common practice. Mr. Reed also suggests that we include non-electric benefits (e.g., savings of other operating costs) as well as program impacts which occur outside the program itself (e.g., post program adoption of efficiency measures). Here too, we agree in principle, but with the observation that such effects may be difficult to estimate reliably.

Finally, Competitive Energy Services (CES) is concerned that we should be certain that our cost benefit tests fully capture the effects of conservation measures on our estimates of the likely price of electric energy. Specifically, CES states: "We know that demand-side response has a very powerful effect on the establishment of market clearing prices in NEPOOL which then reduce the cost of electricity to all other ratepayers in the market. This benefit of DSM appears to be missing from the calculation methodology proposed by the Commission".

While the concern raised by CES is theoretically correct, it is unlikely to have any significant effect on the analysis of any individual interim DSM program. In most, if not all, cases, the interim programs we will consider are too small to exert a significant impact on the energy market and a method for estimating such an effect requires development. That said, we would not rule out considering such secondary impacts where there is credible evidence that those impacts are significant and could be reasonably estimated.

3. Calculation of Costs and Savings

Beyond the specific choice of which cost effectiveness tests to use, there are also data issues. While program costs and energy savings can be considered on a case-by-case basis, certain principles apply to all programs.

First, we establish methods for converting energy savings into dollar cost savings. Ch. 380-O relied on estimations of avoided costs. While prior to restructuring the Commission periodically approved avoided costs for each of the large electric utilities, we no longer do so. When considering interim conservation programs, we will determine generation cost savings by looking to the competitive generation market. For residential and small commercial and industrial (C&I) customers, we will use the prices under existing standard offer contracts for the remaining term of those contracts, since most residential and small C&I customers take service under the standard offer. For other customers, we will base estimates of cost savings on current market conditions as reported in the trade press (e.g. the Natsource quotes of electricity prices for futures contracts). Where the futures market is thinly traded, we will rely on the next best available sources⁷.

L. K. Goldfarb Associates suggested using long-term avoided costs recently developed and approved in Massachusetts. CMP proposed using the T&D utilities' entitlement sales prices as estimates of avoided generation cost. MPS and BHE commented that standard offer prices reflect shorter term, rather than long-term, avoided costs. We will consider these viewpoints when we determine cost effectiveness analysis for long-term programs in Docket No. 2002-162. We believe the simpler approach we have accepted in this Order is adequate for judging interim programs in the short time frame in which we are operating.

⁷ For example, the US Department of Energy routinely publishes forecasted energy prices. See <http://www.eia.doe.gov/oiaf/aeo/index.html>.

We propose to base delivery cost savings (i.e., the costs saved for transmission and distribution) on the marginal T&D costs used to evaluate special rate contracts under utilities' pricing flexibility programs. The Commission routinely approves marginal costs for some utilities. We plan to use reasonable estimates of marginal costs for utilities that have not filed marginal costs in recent years.

CMP commented that its marginal cost calculations are not particularly reliable. However, these values are quite small and will serve to represent that there is some cost, although small, associated with T&D delivery. We also note that CMP has endorsed use of these estimates for other purposes.

Finally, many states currently use cost effectiveness tests that include costs or benefits associated with non-electric resources (e.g., increased use of gas or water), customer O&M expenses (e.g., reduced maintenance on a more efficient product), post-program adoption (e.g., the removal of an efficiency measure), and so-called "spillover effects" (e.g., adoption of additional efficiency measures in response to customers' satisfaction with the original measure). Many commenters supported including such costs and benefits, but only if they can be reliably calculated. We agree. The All Ratepayers Test does not preclude considering such costs and benefits, and we will do so to the extent they can be reasonably well quantified and are reasonably certain to occur.

4. Ability to Calculate Cost Effectiveness

Conservation programs may be divided broadly into two categories, which we will call primary-effect programs and secondary-effect programs. Primary-effect programs are those in which program funding is directly related to kWhs saved. For example, a program that pays a customer a fixed rebate to replace an existing motor with a more efficient motor is a primary-effect program. Program planners can be reasonably certain that some level of savings will occur and can either directly measure the savings or can make a reasonable calculation of savings based on engineering estimates.

Secondary-effect programs are those in which funding is paid to an intermediary, who in turn uses the money for one of a variety of purposes aimed at influencing an energy consumer's behavior. For example, an education or advertising program funds an entity that then influences consumers to use less energy or use it more efficiently. In this instance, cost effectiveness is more difficult to measure, since there is no direct link allowing program planners to measure behavior that results from the program.

While we recognize that both types of programs have advantages and disadvantages, we will strongly favor primary-effect programs in the interim period.⁸ Secondary-effect programs necessarily require more investigation before we can ascertain effectiveness and therefore we are less likely to be able to evaluate their cost effectiveness sufficiently to implement them on an interim basis this summer. Most commenters agreed with our preference, with some commenters asserting that only primary-effect programs should be operated in the interim period. While favoring primary-effect programs, we will not foreclose the possibility of offering secondary-effect programs, because some education and training programs appear to pose clear benefits to consumers.

B. Other Objectives Stated in the Conservation Act

In addition to requiring cost beneficial programs, section 4 of the Act establishes specific objectives that the Commission must consider when developing its statewide plan. Subsection 2 of Section 3211-A states that the Commission shall:

1. target 20% of funds to low income consumers;
2. target 20% of funds to small businesses; and
3. allow all other customers a reasonable opportunity to participate in a program.

In addition, the Commission must consider programs that (summarized):

1. increase consumer awareness;
2. create favorable market conditions for efficient products;
3. promote sustainable economic development; and
4. promote reduced environmental damage.

While the Act relieves the Commission of the obligation to apply the statutory criteria to its interim programs, it clearly indicates the Legislature's preference for accomplishing specific policy goals. Thus, we choose a portfolio of interim programs that meets the statutory criteria to the greatest extent possible. When taken together, the interim programs we authorize through this Order include significant funding for low-income consumers⁹. Two programs target small businesses, while existing utility programs continue to offer measures for that customer segment¹⁰. The portfolio includes programs for residential, medium C/I, state-owned electrical users and schools,

⁸ However, primary-effect and secondary-effect programs exhibit competing advantages. While secondary-effect benefits are more difficult to measure, secondary-effect programs may have the advantage of benefiting a larger number of consumers.

⁹ The refrigerator replacement low-income program comprises 13% of the Tier-1 interim budget.

¹⁰ The DECD small business program comprises 9% of the Tier-1 interim budget. We anticipate that the small business program developed in Tier-3 will provide significant funding to small businesses.

and provides for consideration of a large C/I program. We have authorized two relatively inexpensive programs whose goal is to increase consumer awareness. Two programs offer clear support for economic development. Simply by reducing energy use, the portfolio reduces environmental damage caused by generating facilities, but we have not attempted to quantify this effect in interim programs. Finally, in the interim, we did not explicitly attempt to “create favorable market conditions for efficient products” because that criterion is inherently a long-term goal. However, many of the programs accomplish this goal incidentally.

C. Other Criteria

The Act requires that interim programs be discontinued no later than December 31, 2003. With this in mind, we used three additional criteria when choosing interim programs.

1. Quick Start-Up

We authorize for immediate implementation programs with an established delivery system that can be activated in two months or less. Programs that best meet this criterion include those that are currently operating in Maine or nearby states, that do not require us to issue RFPs for delivery or evaluation, and that do not require complex contracts.

Commenters suggested a variety of programs that appear to be effective but that require more extensive start-up activity or whose design requires more thorough development. We have authorized Commission Staff to implement some of these programs – after developing the design details. In other instances, we will examine these suggestions as part of the long-term plan.

2. Potential as a Pilot

We consider programs that would provide information useful in choosing permanent statewide programs. However, if such a program cannot be implemented quickly, we reject it as an interim program.

3. Proven Successful Elsewhere

Because we have only a few months to choose interim programs, we rely on information already learned in Maine or in other states. While we recognize that, as one commenter suggested, the costs and benefits realized by a program in Maine might differ from costs and benefits elsewhere, we nonetheless believe that such evaluations are reasonable proxies when judging interim programs. Thus, we choose programs that have proven to be cost effective by other entities, including other State agencies in Maine.

IV. EVALUATION

Many commenters urged us to develop an evaluation procedure for each interim program at the time of program design. We agree. Each interim program design will include a means of evaluating its cost effectiveness. The design will include the means for determining and reporting the data items that will indicate program costs (e.g., Commission administrative costs, capital costs, and delivery costs) and program benefits (e.g., life cycle kWhs saved). In this Order, we summarize the monitoring and reporting procedures that will accompany each authorized program. Commission Staff will develop a more detailed determination of the data to measure before each program begins. The Commission will develop a written description of the monitoring and reporting requirements and will enter into a written agreement with each delivering entity that is appropriate for that delivery approach. For example, a contract is appropriate with a vendor or Energy Service Company (ESCO) but a memorandum of understanding is a common means of agreeing on procedures and obligations with another state agency.

The Commission will obtain the data necessary to evaluate the cost effectiveness of each program at regular intervals throughout the year, and will consider this cost effectiveness analysis to determine whether to continue, revise, or discontinue each program after December 2003.

Some commenters believe that direct metering of the equipment or the building before and after the installation of an efficiency measure is important in an evaluation. Other commenters believe that a table of engineered assumptions regarding prescriptive measure savings is appropriate. Both types of savings monitoring are used in existing conservation programs (e.g., comments indicate that Maine State Housing Authority (MSHA) and the Department of Administrative and Financial Services (DAFS) meter before and after implementation, and some ESCOs use whole-house electric bills to measure savings, while Department of Economic and Community Development (DECD) and most prescriptive motor and lighting programs use estimates linked to particular measures). We are persuaded that metering is important if a measure is non-standard or complex, but is not necessary for commonly used appliances or equipment. We direct Commission Staff to use a combination of these two savings monitoring techniques as it determines is appropriate.

Some commenters recommended obtaining baseline usage data from other states. It is likely that the short time frame required for interim programs will preclude extensive baseline data development. However, we will investigate sources of such data and use the information when it is relevant and we will consider baseline data more extensively when we develop our long-term conservation plan.

During past decades, utilities have performed extremely comprehensive evaluations on conservation programs. Such evaluations include (among other things) an estimate of free riders and of longevity of measures. They are costly to perform and

require considerable statistical expertise. Some commenters urged us to consider these factors. L. K. Goldfarb Associates suggested that “business-decision level” assessment is adequate and can be done at far lower cost. We agree and will not perform overly complex evaluations on interim programs. To the extent that we learn of significant free riders or removal of measures, we will consider them in determining future program activity. We will consider whether more comprehensive evaluations are warranted for long-term programs in our Docket No. 2002-162 proceedings.

V. INTERIM PROGRAM APPROACH

A. Three Tiers of Authorized Programs

We will implement interim programs under a tiered approach. First, in this Order we authorize five programs (and recommend one task force) that will be implemented within the next two months. We also authorize two programs for implementation after Commission Staff has determined additional program design details. Finally, we list three programs that may have merit as interim programs but that we are not prepared to authorize without further study.

B. Possible Future Interim Program Authorizations

While at this time we do not authorize study of any additional interim programs, we do not foreclose the possibility of authorizing additional programs in the future if they meet our interim criteria, if funds are available, and if staffing is adequate to carry out the necessary investigations. Interested persons should provide us with proposals or other information regarding potential interim programs.

C. Interim Budget

In this Order, we specify the funding level for the Tier-1 programs. We also state our expectations about the total costs of Tier-2 programs. The funding levels for the Tier-3 programs are less certain, but we discuss the Tier-3 budget. Issues involving overall interim program funding levels, and the utility assessments necessary to achieve that funding, are decided in our Order on Interim Funding issued concurrently with this Order.

D. Utility Programs

In our April 8th Order Extending Utility Energy Efficiency Programs, we directed T&D utilities to continue to operate their existing energy conservation programs in a manner consistent with recent program operations. After we have implemented the Tier-1, Tier-2 and Tier-3 interim programs, we will consider which of the utility programs to continue funding through the Conservation Program Fund. We expect that some utility programs accomplish useful goals but should not continue as interim energy

efficient programs.¹¹ A utility will be able to continue offering such a program through its own funds. We also anticipate that some utility programs will be replaced by new interim programs.

E. Appendix C

In Appendix C, we provide a table that lists the interim programs that are chosen for implementation or further investigation, describes the targeted customer groups and delivery mechanism for each program, and provides the budget for programs or program groups, as well as administration.

VI. TIER-1 INTERIM PROGRAMS – FOR IMMEDIATE IMPLEMENTATION

A. Low-Income Refrigerator Replacement Program

We authorize the implementation of a refrigerator replacement program, to be delivered by the Maine State Housing Authority (MSHA) through the Community Action Program (CAP) Agencies in the manner used to carry out the recent Residential Energy Assistance CHallenge (REACH) program. The program shall include steps to ensure that inefficient refrigerators are not recycled into the State's appliance stock. We will fund this program for one year and consider further funding based on its first-year results. The year-one cost of this program will be \$200,000.

1. Cost Effectiveness

A recent study supporting the cost effectiveness of low-income appliance replacement programs in Maine indicates that a refrigerator replacement program may be marginally cost effective under the All Ratepayers Test established through this Order. MSHA, through an independent party, carried out an evaluation of the costs and savings of nine separate measures offered as part of the REACH program. Refrigerator replacement was one of the measures and was found to be cost effective from the customer perspective. The financial benefits in the REACH evaluation were based on the bundled rate, and the costs were based on the total appliance cost. These cost effectiveness findings can be used to carry out the All Ratepayers Test established in this Order. The standard offer energy rate should be used to calculate the financial benefit, and the full cost of the more efficient appliance should be used to evaluate cost effectiveness. Using the recent standard offer rate in CMP's territory of \$.0495, the 1189 annual kWh savings determined by MSHA monitoring, an appliance life of 18 years, a societal discount rate of 5 per cent, and the full cost of the replacement refrigerator would yield a benefit to cost ratio of 1.02.

¹¹ For example, a program that improves customer satisfaction but does not reduce net energy use would fall in this category.

2. Statutory Criteria Satisfied

a. At least 20% of program funds should be devoted to delivering efficiency measures to low income customers (Subsection 2.B(1) of Section 3211-A).

b. To the extent possible, the commission shall coordinate its efforts with other agencies of the State with energy-related responsibilities (Subsection 2.G).

c. To the extent practicable, the commission shall encourage the development of resources, infrastructure, and skills within the State by giving preference to in-state service providers (Subsection 3.B).

d. For the delivery of conservation programs to low income residential customers, the commission, without employing a competitive bidding process, may utilize the delivery system for the Weatherization Assistance for Low Income Persons Program administered through the US DOE (Subsection 3.C).

3. Delivery System

The low-income appliance program will take advantage of the existing delivery system used for the REACH program, in which MSHA acts as program manager and the CAP agencies serve as the delivery mechanism. Thus, all aspects of the program are in place – CAP employees are trained to recognize and replace inefficient refrigerators, MSHA has ready contacts with vendors who can supply and replace refrigerators, a method for identifying the most needy customers has been established, and a tracking mechanism is in place. Clients have already been screened and audits have identified more than 500 households that would be eligible for appliance replacement given sufficient funds. MSHA and the CAP agencies will deliver the program to these pre-screened low-income households and to households screened through ongoing audits. The incremental administrative costs for offering this program are near zero.

4. Measurement and Evaluation

As one of its responsibilities under the federal program, MSHA must provide program progress reports. MSHA will distinguish measures that were funded by the Conservation Program Fund and will provide that portion of the report to the Commission. The Commission and MSHA will determine other relevant cost or benefits calculations (e.g., MSHA and CAP administrative costs) before the program begins.

5. Comments of the Parties

a. A number of commenters supported the appliance replacement program described in the Proposed Order.

b. CMP commented that its “Home Energy Efficiency Program,” operated in 2000 – 2001, would meet all of the criteria in the Proposed Order and would be effective as a low-income conservation program. Under this program, CMP contracted with an ESCO to deliver weatherization and lighting measures and to determine kWh savings caused by those measures. An independent company verified that the ESCO delivered the measures it reported. The Coalition of Residential and Small Service Providers (the Coalition) supported delivery of weatherization and energy efficiency light bulbs to low-income customers, using a method similar to CMP’s current program, asserting that this program was guaranteed to be cost effective because measures would be pre-screened for cost effectiveness.

c. Commenters warned that refrigerators must be removed from circulation to ensure that energy savings from the program persist.

d. The Industrial Energy Consumer Group (IECG) urged against the refrigerator replacement program, expressing a concern for public misinterpretation and criticism, and urged alternative means for funding low-income initiatives. IECG cited a California program that appeared to operate more cost effectively than does Maine’s program.

6. Discussion of Parties’ Comments

We have considered the advantages of ESCO delivery as opposed to CAP delivery of low-income conservation measures. We recognize that ESCO delivery has proven effective in Maine and elsewhere. However, hiring an ESCO(s) requires that the Commission issue an RFP and develop a contract for both the ESCO and for an independent evaluator. These steps take time and resources and are counter to our criteria of fast start-up. The CAP delivery mechanism has been recognized as a reasonable delivery mechanism by the Legislature in the Act, and is in place and therefore more effective for an interim program. We will consider ESCO delivery for long-term low-income programs.

We also considered the benefits of a weatherization program as opposed to an appliance replacement program. While weatherization is likely to be more cost effective, it is already being delivered through federally-funded CAP programs. Appliance replacement, however, is likely to be cost effective but is not currently funded. Thus, funding an appliance replacement program will complement rather than duplicate existing program activity.

Finally, we considered comments asserting that, for the program to be cost effective, inefficient refrigerators must not be recycled into the State’s appliance

stock. We understand that MSHA disposes of the inefficient models, and we will require that this practice continue. In addition, we direct Commission Staff and MSHA to examine the California program and incorporate cost-saving measures in Maine's program if it is possible to do so.

B. Building Operator Certification (BOC) Program

We authorize fully funding the tuition to the BOC certification program for personnel who operate and maintain school buildings in Maine. Initially, we will fund two program sessions, with maximum attendance of 30 persons per session, on a first-come, first-served basis. The cost will be about \$84,000. After the completion of these sessions, we will consider funding one or more sessions for personnel who operate and maintain public buildings. For interim budget purposes, we assume that two additional program sessions will be held, so that the total cost will be \$168,000.

1. Cost effectiveness

BOC is an education program and the cost effectiveness of education programs has traditionally been difficult to quantify. However, the program that we authorize has been evaluated in the Northwest and is currently undergoing an evaluation in the Northeast. It is conducted jointly by the partners in the Northeast Energy Efficiency Partnership (NEEP), and is identical to the course developed and offered in the Pacific Northwest by the Northwest Energy Efficiency Alliance (NWEAA). The evaluation conducted by the NWEAA found the benefit cost ratio was 5.89 when using an avoided energy cost of 4 cents. Based on this evaluation, it is reasonably likely that this program would be cost effective in Maine. The BOC program requires that attendees carry out on-sight efficiency investigations in order to receive the CEU credits and certification offered by the program, which increases the likelihood that attendees will act as a direct result of the training.

2. Statutory Criteria

a. To the greatest extent practicable the commission should apportion remaining available funds among customer groups and geographic areas in a manner that allows all other customers to have a reasonable opportunity to participate (Subsection 2.B(3)). This program will be offered to all school districts within the State.

b. The commission may coordinate its efforts under this section with similar efforts in other states in the northeast region and enter into agreements with public agencies or other entities in or outside the State for joint or cooperative conservation planning or conservation program delivery, if the commission finds that such coordination or agreements would provide demonstrable benefits to citizens of the State and be consistent with this section, the conservation programs and the objectives and overall strategy for the conservation programs (Subsection 2.I.).

c. To the extent practicable, the commission shall encourage the development of resources, infrastructure, and skills within the State by giving preference to in-state service providers (Subsection 3.B). The contractor for this program does not reside within the State, but the training provided will result in the development of resources, infrastructure, and skills within the State.

d. The commission may select a program service provider for one or more conservation programs without employing a competitive bidding process if the commission finds that the selection of the service provider will promote the efficient and effective delivery of conservation programs and is consistent with the objective and overall strategy of the conservation programs (Subsection 3.C.(1)).

3. Measurement and Evaluation

NEEP is conducting a comprehensive evaluation of this program as it is being offered elsewhere in New England. When offering the program in Maine, we will follow the evaluation protocols that NEEP is using elsewhere and use the resulting information in a manner consistent with its use in the NEEP evaluation.

4. Delivery System

The NWEEA developed the curriculum for this program over an extended period of time. It has trademarked the course and has licensed NEEP to deliver the program through its partners in the Northeast. NEEP currently offers the program through its partners at a variety of locations in New England, and has already established tentative dates for a session in Maine. NEEP does not typically contract for this program. Thus, delivery can occur immediately, at a low incremental cost and with minimal contractual effort.

5. Comments of the Parties

a. The Educational Plant Maintenance Association of Maine supports the need to better educate its members about efficient plant operation, but notes that school budgets would rarely fund tuition of such a comprehensive course.

b. Some commenters indicated general approval for offering this program, but felt it should be offered to municipalities, state facilities, and small companies. The Coalition and others suggested that small business owners seldom attend such a program, while others asserted that education of building operators did not produce as effective results as would a primary-effect program.

c. BHE and other parties commented that BHE's "CEM" facilities operations program serves a different audience (i.e., administrators) than does the BOC program. Thus, the BOC program complements, rather than duplicates, existing activity.

6. Discussion of Parties' Comments

The education provided by the BOC Program will enable operating personnel to make more informed assessments of how energy is used within their own facilities and to better evaluate services offered by vendors of energy consuming equipment. Some commenters asserted that small businesses were unlikely to expend the time or money to attend the training. Others asserted that prior training initiatives had reached those people who would take advantage of them. However, discussions with the Educational Plant Maintenance Association of Maine (EPMAM) convince us that there is a pool of personnel whose decisions economically impact their school districts, who have received minimal training in some important issues, and who have a trade organization that is willing to facilitate organization of the training. While we prefer direct benefits programs during the interim period, the efforts to evaluate the BOC program reassure us that there are likely to be benefits from this admittedly secondary-effect program. Gaining direct insight into the program, while assisting our State's schools, is a wise investment of a relatively small portion of the Conservation Program Fund. If we judge these initiatives to be cost beneficial, we will investigate whether a means exists to deliver the program to public building operators and ultimately to small businesses.

C. State Buildings Program

We authorize funding for energy efficiency renovations of State buildings. We direct Commission Staff to work cooperatively with the Maine Department of Administrative and Financial Services (DAFS) to identify projects that are cost effective using the All Ratepayers Test established in this Order and that most effectively reduce operating costs supported by Maine taxpayers and improve the working environment and productivity of the State workforce. An individual project or multiple projects can be funded, up to \$1.5 million.

1. Cost Effectiveness

Projects that are approved for funding under this program will be pre-screened against the All Ratepayers Test. Energy savings will be verified whenever possible through the use of pre- and post-measure metering and measurement. When this is not possible, savings will be estimated through engineering methods.

2. Statutory Criteria

a. To the greatest extent practicable the commission should apportion remaining available funds among customer groups and geographic areas in a manner that allows all other customers to have a reasonable opportunity to participate (Subsection 2.B(3)). This program will provide direct benefits to all taxpayers in Maine.

b. The commission, to the extent possible, shall coordinate its efforts with other agencies of the State with energy related responsibilities (Subsection 2.G.). DAFS is responsible for the energy consumption of all State facilities.

c. The commission may select a service provider without a competitive bidding process if it finds that the selection of the service provider will promote the effective and efficient delivery of the programs (Subsection 3.C(1)). DAFS can serve as project manager for this program. It will use a competitive bidding process to select the construction contractor.

3. Measurement and Evaluation

Projects funded through this program will first be examined for energy savings through an engineering investigation, and energy savings will be estimated for each measure. In some instances, the projects will also have metered data on pre-project energy consumption. The meters will remain in place, and DAFS will generate pre- and post-project consumption data and report that data to the Commission at regular intervals.

4. Delivery System

DAFS examines and carries out program renovation regularly. DAFS will carry out all administrative functions including contracting and metering.

5. Comments of the Parties

Many commenters supported this program, while some asserted that retrofitting existing buildings is not an efficient use of funds. NEEP recommended using the ENERGY STAR building program to efficiently identify the best opportunities.

6. Discussion of Parties' Comments

We believe that targeting State buildings is a way to benefit a wider number of citizens than just those who directly participate in a program. We direct Commission Staff to consider the ENERGY STAR guidelines when it determines the criteria by which incremental energy savings will be determined.

D. Department of Economic and Community Development (DECD) Energy Conservation Loan Program

We authorize a one-time disbursement of \$200,000 to DECD to recapitalize the DECD-managed small business loan fund. DECD loans made with Conservation Program funds must be used for electric energy efficiency and must target energy efficiency measures that DECD pre-determines to pass the All Ratepayers Test established through this Order.

Currently, DECD operates a commercial loan program for small Maine businesses (businesses with 50 or fewer employees and/or \$5M or less in annual sales). The program is funded by the US Department of Energy (US DOE) and could serve more small businesses if its revolving loan fund were recapitalized. DECD staff already conducts energy audits for small businesses throughout the State, through which they identify cost effective opportunities that would be eligible for a loan. DECD currently has a list of businesses who qualify for a loan but for whom no funds exist.

1. Cost Effectiveness

Commission Staff will train DECD auditors to apply the All Ratepayers Test established in the Order, and DECD will use a portion of its loans equal to the amount of Conservation Program funding for projects that pre-screen to be cost effective. Because the majority of DECD delivery and administration costs are funded by the federal government, the cost effectiveness to Maine ratepayers is improved.

2. Statutory Criteria

a. Target at least 20% of available funds to programs for small business consumers, as defined by the commission by rule (Subsection 2.B.(2)). This program is available only to small businesses.

b. The commission to the extent possible, shall coordinate its efforts with other agencies of the State with energy-related responsibilities (Subsection 2.G). DECD will carry out all administrative functions, including contracting and post-implementation inspection.

c. The commission may select a service provider without a competitive bidding process if it finds that the selection of the service provider will promote the effective and efficient delivery of the programs (Subsection 3.C(1)).

3. Measurement and Evaluation

As one of its responsibilities to US DOE, DECD must regularly provide data on each loan. In addition, DECD and US DOE conduct post-installation visits to each site to ascertain that the efficiency measure was installed. DECD determines kWh savings through a standardized table of measure savings and interviews with the business. Thus, DECD now gathers the data necessary to determine whether the program is cost effective. It will distinguish measures that were funded by the Conservation Program Fund and will provide all data to the Commission. The Commission and DECD will determine other necessary cost or benefits calculations (e.g., DECD administrative costs and interest payments) before the program begins.

4. Delivery

DECD currently manages and delivers the loan program and is capable of identifying a reasonable number of additional candidates with current staff. While we cannot judge how many additional loans DECD staff could handle, the number would be limited by the small staff size. The budget for this program will reflect this limiting factor. DECD currently has identified businesses that would be eligible for a loan if funds were available. The additional training and reporting will place a minimal burden on DECD and Commission staff.

5. Comments of the Parties

This proposal was made after we issued our initial order. Therefore no one has had an opportunity to comment on this program concept.

6. Discussion

Our Proposed Order offered minimal support for small businesses. This program offers additional funding for that segment, as directed by the Conservation Act. The program also increases the level of funding that supports economic development, because the loans are used for capital improvements that lower costs for local businesses. Finally, it is easily delivered and tracked. For these reasons, we approve this expenditure without pursuing further stakeholder comment. We direct Commission Staff to explore with DECD whether the DECD loan fund can be more effectively enhanced by some other means such as developing a loan guarantee approach.

E. Maine Energy Education Program (MEEP)

We authorize an allocation of \$50,000 to MEEP to operate the program for the upcoming school year. After one year, we will consider whether to allocate additional funds to MEEP. When we consider future funding of MEEP (or any other curriculum-based program), we will rely on information that is presented to us by the task force we describe in paragraph F of this Section.

1. Cost Effectiveness

While MEEP and its supporters have described the educational benefits of the MEEP curriculum, they have not calculated an economic cost effectiveness analysis. However, the program costs are relatively low and the benefits, even if substantial, would be difficult and expensive to estimate.

2. Statutory Requirements Satisfied

a. The commission shall increase consumer awareness of cost effective options for conserving energy (Subsection 2.A(1)).

b. The commission shall, to the greatest extent practicable, apportion remaining available funds among customer groups and geographic areas (Subsection 2.B(3)). MEEP serves schools throughout the State.

3. Measurement and Evaluation

We know of no measurement or data that MEEP can provide at the end of a year that will allow us to determine cost effectiveness using the All Ratepayers Test method established through this Order. Thus, we suggest that MEEP participate in the task force we describe in paragraph F of this subsection.

4. Delivery System

MEEP is a well-established delivery mechanism that requires no intervention by the Commission. In this aspect, it is suitable for interim program implementation.

5. Comments of the Parties

Many conservation stakeholders view school-based education as an important component of state conservation efforts because these programs appear to help produce an energy literate citizenry. These programs appear to influence current and future conservation actions and efficiency purchases as children, teachers and school facilities managers who participate in these programs, and perhaps also their families, make energy-related decisions and purchases.

We received an unusually large number of comments regarding educational programs generally and the MEEP project in particular. In addition to extensive discussion at the public hearing, we received more than 25 written comments in support of the MEEP program from a wide array of individuals, including officials of DEP, the Maine Conservation Corps, a member of the Legislature, the Greater Portland Council of Governments, a national group which focuses on energy and conservation education, numerous teachers and principals, and a parent who home-schools and has relied on resources from MEEP. In addition, MPS commented in favor of its own education program. Finally, the Coalition objects, stating that "one of the major benefits of ... education programs is that even if they show no results for twenty years, consultants can still claim that it is too early to determine its effectiveness."

6. Discussion of Parties' Comments:

Because the law requires that programs be cost beneficial, our ability to fund MEEP with the Conservation Program Fund is somewhat problematic. While we are persuaded that the program is extremely valuable to many people, we must be mindful of the legal authority conferred by the Conservation Act. We have chosen to fund MEEP on a one-time basis because the amount of money we have

authorized is a small portion of the total fund, because the program appears to be desirable to many people, and because MEEP apparently would be unable to support its program absent additional funding. However, if MEEP intends to seek additional funding, we strongly urge it to develop a means to conform with the requirements of the Conservation Act, so that we may evaluate its benefits pursuant to the law.

F. Maine Energy Curriculum Investigation

We authorize Staff to develop, within 30 days, a detailed proposal, with funding of \$10,000, to support a statewide education task force that will consider the most effective means of delivering energy education to Maine school children. The task force will consider means for measuring energy saved as a result of in-school education.¹²

Many in-school curriculum programs exist nationally. In addition, a variety of in-state efforts exist to develop curricula to improve knowledge of energy production and uses. The College of Education and Human Development of the University of Maine submitted a proposal to develop a curricula aid in the areas of energy, conservation, consumption and production. We are inclined to think that this initiative would be a useful addition to Maine's educational tools. MEEP offers another curriculum approach. MPS offers yet another in-school program for grades K - 12. We applaud these initiatives, and we generally support any effort to create an energy-literate public that can make informed decisions about the economic, social, and environmental impacts of its energy choices. We do not possess the expertise to judge educational programs. Thus, we conclude that we can best serve the needs of this community by offering some seed money to help experts in the subject determine the most effective approach to take.

The task force will report its findings to the Commission within ten months of this Order, and the Commission will consider its findings when authorizing further funding of in-school education programs through the Conservation Program Fund.¹³ We direct that the task force consider a proposal submitted by the College of Education and Human Development at the University of Maine in this proceeding, the existing MEEP curriculum, and the MPS in-school education program. However, the task force should also feel free to consider any other approaches which it considers promising.

¹² We note that staff has already had preliminary discussions with a non-profit institution, the Maine Mathematics and Science Alliance, regarding assembling a task force, composed primarily of education professionals.

¹³ We recognize that educational programs benefit a large number of citizens, and we do not suggest that we will fund only programs whose benefits the task force can directly quantify.

VII. TIER-2 INTERIM PROGRAMS – TO IMPLEMENT AFTER FURTHER PROGRAM DESIGN

A. Residential Energy Efficient Lighting Program

We authorize the implementation of a rebate-based residential lighting program, to be implemented after an operator and a monitoring agency are chosen through a competitive bid process. Commission Staff, through further investigation and the RFP process, shall determine the level of rebates and the method of their delivery.

An efficient lighting program provides the broadest opportunity for residential consumers to take advantage of efficiency programs funded with Conservation Program funds. Customers in all areas of the State and at all income levels purchase and use lights. The program can operate as both a traditional resource acquisition program while, at the same time, influencing market change. Lighting programs in a variety of forms have been found to be cost effective in many states.

As an interim program, we prefer a rebate approach over direct installation by an ESCO. We believe rebates offer greater flexibility and faster start-up. A NEEP Residential Lighting initiative is offered throughout the Northeast, and many utilities participate. Many of the participating utilities run the program themselves according to a set of common strategies that has been agreed to through the NEEP collaborative process. It is highly likely that some of these utilities and other in-state service companies would respond to an RFP that solicits a program administrator to operate the program in Maine.

1. Cost Effectiveness

The NEEP residential lighting program has been found cost effective according to the Total Resource Cost (TRC)¹⁴ tests used in other New England utility service territories. Connecticut Light and Power reports a TRC benefit-cost ratio of 2.6, United Illuminating reports a TRC benefit-cost ratio of 1.2, and Massachusetts Electric Company reports a TRC benefit-cost ratio of 1.98. Applying CMP's residential standard offer energy rate to the TRC test, and making assumptions¹⁵ that are consistent with findings from other programs yields a TRC (and All Ratepayers Test) benefit-cost ratio of 2.08 for Maine.

¹⁴ The All Ratepayers Test and the Total Resource Cost Test are unlikely to differ for these programs.

¹⁵ The assumptions are as follows: a 15 watt CFL costs \$10 and has a life of 8000 hours; a 75 watt incandescent costs \$.5 and has a life of 750 hours; they are on 3.44 hours per day; and the discount rate is 5%.

2. Statutory Criteria

a. The commission shall consider programs that create more favorable market conditions for the increased use of efficient products and services (Subsection 2.A.(2)).

b. The commission shall increase consumer awareness of cost effective options for conserving energy (Subsection 2.A(1)). A lighting program raises consumer awareness through increased visibility in retail stores and the advertising media.

c. The commission shall apportion funds in a manner that allows all customer groups to have a reasonable opportunity to participate (Subsection 2.b.(3)). Lighting is purchased and used by virtually every household in the State.

d. The commission may coordinate its efforts under this section with similar efforts in other states in the northeast region and enter into agreements with public agencies or other entities in or outside the state for joint or cooperative conservation planning or conservation program delivery, if the commission finds that such coordination or agreements would provide demonstrable benefits to citizens of the State and be consistent with this section, the conservation programs and the objectives and overall strategy for the conservation programs (Subsection 2.I.). The existence of a well-established regional lighting initiative makes this approach reasonable in the interim period.

e. The commission shall select service providers through a competitive bidding process (Subsection 3.A).

3. Measurement and Evaluation

There are a variety of commonly-used means of evaluating a lighting program. Evaluators can count the number of people who take advantage of the program and the equipment they buy, and use the energy savings per bulb from existing evaluations from other jurisdictions to estimate the program's energy savings. At a modest cost, we can also join in the NEEP effort to evaluate the extent of the market transformation accomplished by the program. We direct Commission Staff to determine the best method of evaluation and to rely on measurements of installations in Maine to the greatest extent possible.

4. Delivery

The program will be delivered by an operator chosen through a competitive bid process.

5. Comments of the Parties

a. The Coalition asserts that evaluations of prior residential lighting rebate programs have shown a high level of free riders, inappropriate use, and consumer dissatisfaction. They claim that a direct install program is more effective.

b. NEEP asserts that their program has been screened elsewhere and found cost effective, that there is a regional contractor and marketing infrastructure that would allow Maine to begin almost immediately, and that the program allows broad customer participation. Benefits of greater sales of the more profitable compact fluorescent lights (CFLs) would accrue to retail stores participating in the program.

c. CMP asserts that there is no indication that the program would be cost effective and that the lighting market has already been transformed.

d. BHE and MPS prefer a Maine based approach.

6. Discussion of Parties' Comments

We disagree with CMP's comment that the lighting market has been transformed and that cost effectiveness is unlikely. Virtually every state that carries out conservation activity offers residential lighting initiatives from time to time. Cost effectiveness appears to be universal. We have considered the advantages of a rebate program compared with an ESCO delivered program. Both incentive mechanisms are well-established and show likelihood of success. In the interim, a rebate program using an established regional program offers faster start-up and easy tracking. We thus prefer this approach.

B. New School Construction Program

In our Proposed Order, we recommended that an energy efficient lighting program be targeted to schools within the State. While many commenters supported assistance to schools, their opinions on competing approaches varied significantly. Comments offered at the public hearing and through written submissions suggested that efficient lighting has already been installed at most schools. Other comments refuted this assertion. Three Rivers Engineering advocated a "lighting quality" approach performed by a professional engineer or architect, and supported NEEP's DesignLight Consortium. Testimony by Combined Energy and others suggested that if lighting measures are installed without considering all school efficiency needs, an opportunity is lost and other efficiency improvements may never be addressed. The Public Advocate, NEEP and many others suggested that the Commission should focus on new construction rather than retrofit because measures installed at construction are more cost effective and capture an opportunity that would otherwise be lost. The Maine School Management Association (MSMA) supported focusing on new school construction, commenting that such a program would complement consulting assistance

that MSMA is attempting to obtain through a grant. Combined Energies suggested complementing any program with training on procurement mechanisms.

We continue to support a lighting efficiency program for school facilities. We believe that targeting schools is a way to benefit a wider number of citizens than just those who directly participate in a program. However, these comments persuade us that we must consider a wide variety of related issues associated with school lighting, as well as the organizations and procedures that are involved with school decisions. We are also persuaded that it is advantageous to focus on new school buildings rather than existing structures. A significant level of construction is currently planned, and we agree that installing an efficient measure during construction is more cost effective than retrofitting later. Nevertheless, we are concerned that a program targeted to new construction cannot be implemented in the short time frame appropriate for interim programs. In addition, we are mindful that any activity we initiate must be closely coordinated with the procedures followed by DAFS, the Maine Department of Education, and school administrators themselves during the school construction cycle. Thus, we authorize the Commission Staff to develop the details for a program that would target lighting efficiency in new school construction that complements existing State procedures. If Staff's investigation reveals that such a program cannot be implemented within the next three months, we will reconsider our decision.

C. Tier-2 Budget

At this point, many details concerning the Tier-2 interim programs remain to be decided. It is not possible to set a funding level for either program. Based upon the cost of similar programs and conservation measures, we anticipate that we will spend a total of \$2.5 million for the tier-2 programs.

VIII. TIER-3 INTERIM PROGRAMS – TO IMPLEMENT IF FURTHER INVESTIGATION INDICATES EFFECTIVENESS

A. Small Business Prescriptive Rebate Program

Commenters suggested that a direct-install rebate program would be effective for small business customers. The program could be run by a single (or small number of) ESCOs chosen through an RFP, or the Commission could pre-qualify vendors throughout the State to deliver the measures. Such a program would acknowledge that small business owners often do not have the time or the expertise to investigate or install efficiency measures. Other utilities offer such programs, and there are ESCOs, vendors, and other utilities that can offer a program in Maine with minimal start-up effort or cost. This program approach cannot reasonably be implemented within our 2-month time frame because it requires issuing and evaluating RFPs and/or RFQs for delivery and for monitoring. Furthermore, all these suggestions require further investigation before we can conclude that any one is a reasonable interim program. Finally, such programs would duplicate aspects of CMP's Energy Efficiency Incentive Program (the so-called Nickel Program), which offers prescriptive rebates to small and

medium sized businesses.¹⁶ Because two interim programs – the DECD loan program and CMP's Nickel Program – are available for small businesses, we will defer a direct-install program until we develop further details and we determine whether and how to phase out CMP's program. We direct Commission Staff to investigate this program approach further. We direct the Staff to consider a program delivery mechanism that uses in-state delivery companies to the greatest extent possible.

B. Low-income No-charge Lighting Program

Some commenters suggested that an ESCO install energy efficient light bulbs or fixtures in low-income households as part of a broader weatherization program, or that CAP agencies dispense energy efficient light bulbs as part of their weatherization program. We are inclined to agree that an efficiency lighting program would be a cost effective means of further targeting funds to the low-income community. In the interim, complementing the refrigerator replacement program would be the most consistent, cost effective approach. Thus, we will defer consideration of ESCO installation and of installation of fixtures until we consider long-term programs. We authorize Commission Staff to develop program design details for delivery of bulbs as part of the CAP weatherization program.

C. Large C/I

Suggestions for large C/I interim programs generally fell into two categories. First, Envinta offered a systematic senior management awareness program that encompasses building assessment benchmarking and training. This program could be effective for medium to large businesses. At this time, we are not certain whether businesses' senior management would be receptive to such a program. In addition, benefits would likely be long-term, rather than immediate. However, the program merits further investigation. Competitive Energy Services and S&S Technologies suggested a customized analysis of individual large customers in which an ESCO screens for cost effective improvements and receives payment based on savings achieved. Customized process analysis, using a performance contract of some sort, is a common means of delivering energy efficiency programs to the largest business customers, and bears further investigation.

Large C/I programs exhibit conflicting characteristics. On the one hand, some of the State's largest customers – those that receive transmission-level service and those that receive reduced electric delivery rates – make little or no contribution to the Conservation Program Fund. Furthermore, existing spending on CMP's large C/I Power Partners programs exceeds our interim program budget. On the other hand, it is likely that opportunities exist that are highly cost effective and that contribute to economic development in the State. We will consider a large C/I program during our Tier-3 investigation, while remaining mindful of the outstanding funding questions. We

¹⁶ Some commenters also suggested increasing the customer incentive from 5 cents to 10 cents, to better overcome the hurdle associated with capital investment.

will consider how current rate design comports with the Conservation Act and whether we should reconcile the apparent inequity that would occur if this group receives benefits from the fund in Docket No. 2002-162 or further conservation-related dockets.

D. Tier-3 Program Budget

The Tier-3 programs are not certain enough to reasonably establish funding levels for the individual programs. Our decision in the Interim Funding Order, also issued today, after subtracting for Tier-1, Tier-2, existing utility programs and administrative costs, leaves about \$3 million for Tier-3 programs. That amount will allow us to implement Tier-3 programs at a reasonable level given the experience of similar utility and other state programs. Even if further investigation results in the rejection of the Tier-3 programs described above, we are confident that sufficient cost effective conservation exists that the Tier-3 budget amount will likely be necessary to implement interim or "permanent" programs during 2003.

IX. PROGRAMS NOT CURRENTLY SELECTED FOR INTERIM PLAN

There are additional programs that were mentioned in our Proposed Order as possible interim programs or that were suggested by commenters as interim programs. We will discuss some of these, and explain why we do not include them in our Interim Program Plan.

A. NEEP Motor-Up Program

In our Proposed Order, we suggested NEEP's Motor-Up program as an interim program. We commented that it could be implemented quickly, it supported small businesses, and it created favorable market conditions for efficient products.

Some commenters asserted that the Motor-Up program is not suitably effective to be included as an interim program. They commented that small business customers do not benefit significantly from the program and that no thorough evaluation has been performed. Our study of the program leads us to believe that efficient motors may be generally available in the region, although based on the XENERGY study cited in our Proposed Order, the extent to which this is true of Maine is unclear. However, the program is a secondary-effect program, and thus cost benefit analysis would be difficult to perform. We have stated our preference for primary-effect programs unless strong evidence convinces us of the value of a program. We have not been convinced that the need and effectiveness of the Motor-Up program is great enough to outweigh our intent to offer direct-effect programs that are clearly cost beneficial.

B. Programs to Replace Coin-Operated Washing Machines with Efficient Units for Laundromats and Multi Family Units

Two commenters suggested this program. They stated that a new program in Wisconsin addressed coin-operated washers, with significant penetration in

a very short time. The new machines use less electricity and reduce the amount of water needed, which indirectly saves electricity if the water is heated by an electric water heater. This program cannot meet our quick-start criteria but can be considered in our long-term plan.

C. The Expansion of the LED Exit Sign Conservation Program

Energy Solution Partners, one of the providers of an existing program in CMP's and MPS's service territories, suggested we expand the program. The program provides free exit sign retrofit kits with light emitting diode (LED) lights which use significantly less electricity than exit signs using incandescent or compact fluorescent bulbs. The existing program targets state, municipal and public school buildings. We recognize that existing vendors are capable of quickly implementing this program. Nonetheless, we would be required to issue an RFP for services. When compared with the other interim programs we have selected, we are not persuaded that the benefits justify the start-up time.

D. Program to Activate Power Management Functions on Computer Monitors

Cadmus Group suggested a joint Maine-EPA effort to activate power management functions that would allow more efficient use of computer monitors as an alternative interim program. It suggested we could leverage an existing EnergyStar program managed by the commenter. As a secondary-effect program, we choose to defer consideration of this program to the long-term plan.

E. Pilot Program to Assess Conservation and Demand-Side Management in Maine's Small Grocery Stores

Competitive Energy Services (CES) proposed to thoroughly analyze electricity usage in small grocery stores and similar facilities as a first step in the subsequent development of various conservation measures that can be implemented by these facilities to reduce electricity usage. CES stated that this group of commercial customers has been ignored by utility-sponsored programs. It also stated that these customers' electricity usage is inefficient based upon the technology now available. By performing audits, CES will develop energy retrofit packages that can be installed in or applied to small grocery stores. Because the program is not yet developed, and the funds would be used for development rather than implementation, we believe that this proposed pilot is better suited for long-term plan consideration.

F. Codes Enforcement

During the public hearing, Dan Thayer of Thayer Engineering suggested that funding be used to improve the State's effectiveness in enforcing Maine's construction building codes. DECD advised us that, although Maine's codes are among the most stringent in the nation, it is difficult if not impossible for DECD (who is charged with enforcement responsibility) to effectively enforce those codes.

This suggestion has considerable merit and we would support efforts to improve enforcement activity. However, this task undoubtedly requires the cooperation of a wide variety of State and private organizations, and we do not see a means to accomplish it as an interim activity.

X. FUTURE ACTIONS

The Staff is directed to implement the Tier-1 programs as described in this Order. We delegate to the Director of Technical Analysis, or her designee on the Conservation Staff Team, the authority to enter into contracts, memoranda of understanding, or similar agreements, as is necessary to implement programs consistent with this Order. Staff is also authorized to spend up to 10% more than the amounts described in this Order to implement the Tier-1 programs. Spending decisions beyond the 10% contingency must be made by the Commission. Implementation decisions for Tier-2 and Tier-3 programs will be made after Staff carries out the tasks described in this Order and reports back to the Commission.

Dated at Augusta, Maine, this 13th day of June, 2002.

BY ORDER OF THE COMMISSION

Dennis L. Keschl
Administrative Director

COMMISSIONERS VOTING FOR: Welch
 Nugent
 Diamond (with concurring opinion)

THIS ORDER HAS BEEN DESIGNATED FOR PUBLICATION

NOTICE OF RIGHTS TO REVIEW OR APPEAL

5 M.R.S.A. § 9061 requires the Public Utilities Commission to give each party to an adjudicatory proceeding written notice of the party's rights to review or appeal of its decision made at the conclusion of the adjudicatory proceeding. The methods of review or appeal of PUC decisions at the conclusion of an adjudicatory proceeding are as follows:

1. Reconsideration of the Commission's Order may be requested under Section 1004 of the Commission's Rules of Practice and Procedure (65-407 C.M.R.110) within 20 days of the date of the Order by filing a petition with the Commission stating the grounds upon which reconsideration is sought.
2. Appeal of a final decision of the Commission may be taken to the Law Court by filing, within **21 days** of the date of the Order, a Notice of Appeal with the Administrative Director of the Commission, pursuant to 35-A M.R.S.A. § 1320(1)-(4) and the Maine Rules of Appellate Procedure.
3. Additional court review of constitutional issues or issues involving the justness or reasonableness of rates may be had by the filing of an appeal with the Law Court, pursuant to 35-A M.R.S.A. § 1320(5).

Note: The attachment of this Notice to a document does not indicate the Commission's view that the particular document may be subject to review or appeal. Similarly, the failure of the Commission to attach a copy of this Notice to a document does not indicate the Commission's view that the document is not subject to review or appeal.

APPENDIX A

Readers receiving an electronic version of this Order should access the “Electric Conservation Activities” section of the Commission’s web site (www.state.me.us/mpuc) to obtain a copy of the Conservation Act.

APPENDIX B**PERSONS WHO FILED WRITTEN COMMENTS**

1. Stephen G. Ward, Public Advocate
2. Richard P. Hevey, on behalf of Central Maine Power Company
3. Anthony W. Buxton and Richard M. Esteves, on behalf of Residential/Small Commercial Service Providers Coalition. The Coalition consists of Quality Conservation Services, Inc., SESCO, Inc., and George Reeves Associates, Inc.
4. Lynn K. Goldfarb, President of L.K. Goldfarb Associates
5. Brian K. Dancause, Manager, Small Business Assistance, State of Maine Department of Economic and Community Development
6. Susan Coakley, Jon Linn, Glenn Reed and Elizabeth Titus, on behalf of Northeast Energy Efficiency Partnerships, Inc. (NEEP)
7. Richard A. Lewia, on behalf of Educational Plant Maintenance Association of Maine
8. Richard V. Rusnica, on behalf of Bangor Hydro-Electric Company
9. Steve Szotkowski and Susan Liebling, on behalf of S&S Technologies, Inc.
10. Laurie L. Flagg, on behalf of Maine Public Service Company
11. Joseph A. Disanza, President of Sebago Energy Conservation
12. Duncan Morrison, on behalf of Combined Energies, a division of Union Water Power Company
13. Dale A. Douglass, on behalf of Maine School Management Association
14. Roger A. Knowlton and Nancy L. Pratt-Knowlton, on behalf of Energy Solutions Partners
15. Richard S. Davies, on behalf of Maine Community Action Association
16. Virginia L. Mott
17. Devon L. Carter, on behalf of Three Rivers Engineering, Inc.

18. Robert Huang, on behalf of The Cadmus Group, Inc.
19. Richard Silkman, on behalf of Competitive Energy Services, LLC (two filings)
20. Jim Verrill, on behalf of College of Education and Human Development University of Maine at Orono
21. Skip Dumais, on behalf of Van Buren Light & Power District
22. Peter Merrill, on behalf of Maine State Housing Authority
23. Jonathan Jutsen, CEO of EnVinta Corporation
24. Anthony W. Buxton, on behalf of the Industrial Energy Consumer Group (IECG)
25. In support of Maine Energy Education Program (MEEP), representatives of:
 - Stevens Brook Elementary School
 - Central Elementary School
 - Maine Department of Economic and Community Development
 - Kids and Transportation
 - The NEED Project
 - Maine Conservation Corps
 - John W. Chandler
 - Heather Healey
 - Maine Department of Environmental Protection (multiple filings)
 - Maine Bureau of Air Quality Control
 - Augusta Public Schools
 - Peace Fleece
 - Mt. Vernon Elementary School
 - Wiscasset Primary School
 - Stefanie von Kanneurff-McLeith (homeschool)
 - Crooked River Elementary School
 - St. Albans Consolidated School (multiple filings)
 - Mabel Desmond, State Representative
 - Gardiner Area High School
 - M.S.A.D. 75
 - Marshwood Middle School
 - MEEP

PEOPLE WHO COMMENTED AT THE PUBLIC HEARING

Richard Davies	Maine Community Action
Peter Merrill	MSHA
Jon Linn	NEEP
Glenn Reed	NEEP
Elizabeth Titus	NEEP
Joel Downs	Kennebunk Light & Power District
Chris Carroll	MEEP
Deb Avalone-King	MEEP
Peter Zack	MEEP
Wayne Clark	MEEP
Mary Ellen Miner	MEEP
Victor Grob	MEEP
Skip Dumais	Van Buren Light & Power District
Joe Disanza	Sebago Energy
Steve Ward	OPA
Michael L. Wacker	EMC
Dan Thayer, P.E.	Ashrae & Thayer Corp.
Duncan Morrison	Combined Energies
Brian Dancause	DECD
Joyce Dytmmmer	AARP
Rich Hevey	CMP
Sue Jones	NRCM
Geoff Clark	Nyle Special Products
Norman Anderson	American Lung Association

Separate Opinion of Commissioner Diamond

I concur with the decision of the Commission on the cost effectiveness test for interim conservation programs and on the specific programs to be adopted. In doing so, I am motivated in part by the need to implement at least some programs without further delay and by the Commission's past reliance on the All Ratepayers Test. I have sufficient doubts about that test, however, that I believe it warrants further scrutiny when we consider permanent conservation programs, a process for which we will fortunately have more time.¹⁷ Thus, the purpose of this separate opinion is to raise certain cost effectiveness issues that I hope will be more completely addressed in the context of the permanent programs.

Before discussing the All Ratepayers Test, let me offer some brief observations about the two alternatives - the Rate Impact Test and the Societal Test. Both have perfectly reasonable goals, but as discussed in the Commission's Order, have defects in serving as measurement tools, especially for specific programs.

Projects that pass the Rate Impact Test are easy to justify in theory. If the savings of the non-participant for the same amount of electric consumption are greater than the amount of the conservation assessment, everybody wins, with the possible exception of the shareholders of utilities under long-term incentive rate plans. Unfortunately, with a competitive wholesale electricity market that operates on a regional basis, we may never be able to conclude with any confidence that a particular conservation program or portfolio of programs reduces the price of power by a material amount, thereby calling into question the future relevance of this test.¹⁸ In addition, use of this test would militate in favor of concentrating on peak shaving programs, as that is where there would be the greatest potential to reduce energy prices.

I also support the theoretical underpinnings of the Societal Test, since benefits such as a cleaner environment and a stronger economy inure to all. Again, my problem is whether anyone can demonstrate a sufficient nexus between traditional conservation programs and these benefits to satisfy a cost effectiveness test. For example, there may well be more direct ways to improve the environment than through programs that do not differentiate between electricity generated by wind and by coal. If environmental protection is indeed one's goal, would we not get more bang for the buck by spending to promote green power than by spending to curtail usage regardless of the generation source? In short, the broader goals envisioned by the Societal Test require a far more expansive consideration of the alternatives, including those that do not involve conserving electricity.

¹⁷ While the Order observes that the Commission has been struggling for 25 years with the question of how to measure the cost effectiveness of conservation programs, this is the first time it has received in-depth consideration during my tenure.

¹⁸ How to measure the impact of conservation programs on the price paid for electricity by non-participants may warrant further consideration when we address permanent programs.

Given the great difficulty, if not the impossibility, of measuring benefits under the tests described above, the decision to rely on the All Ratepayers Test is not surprising. Under that approach, we treat all consumers as if they are a single consumer by measuring whether, as a group, their savings in electricity costs under a particular program are greater than the cost to them of that program.

As I understand it, the benefit from satisfying the All Ratepayers Test is that as a society we spend less for electricity, through greater efficiency rather than through diminished output, and thus have more to spend on other goods and services. By itself, that certainly is a laudable goal. The problem arises, however, from the fact that especially in limited participant programs,¹⁹ the costs are borne by the many and the benefits go to the few, and it falls to government to effect this transfer in wealth. And if the object is to maximize the amount of electricity saved, the argument can be made that the winners should be those who use the most electricity in the most inefficient manner, as they have the potential to achieve the greatest savings.

My doubts about the wisdom of using this collective approach to measuring costs and benefits to justify having government transfer wealth stem in part from the following question: if this is such a good idea, why do we not do it in other areas? Why do we not impose an assessment on heating oil purchases and operate heating oil conservation programs whenever we can demonstrate that the collectively measured gains will be greater than the collectively measured costs? Why do we not impose an assessment on car purchases and give stipends to some customers to purchase hybrid cars if the aggregate savings in gasoline will be greater than the total amount of the assessments? These programs arguably have the added advantage of promoting national security.

Indeed, we could have this type of program for any commodity for which bulk purchases are available. As a group, we might be able to buy oranges more cheaply with a modest assessment on all given to some to buy in bulk. By spending less as a society on Vitamin C, we could spend more on Vitamin A.

My uneasiness is only enhanced by the fact that the transfer of wealth accompanying this collectivization of costs and benefits is carried out not by the market but by government. It was hardly surprising that we received an unusually large number

¹⁹ My doubts about the All Ratepayers Test are strongest in the context of limited participant programs, as the savings are enjoyed by only a few consumers while the majority pays more. Unfortunately, these are often the primary effect programs, in which the savings are easiest to measure. As a result, achieving certainty of savings and a broad distribution of benefits may at times be conflicting goals.

of comment letters in this Docket and that the vast majority support conservation. As with any endeavor where the benefits to a few may be substantial²⁰ and the cost to the many modest, those whose only involvement may be to pay the assessment are too busy making a living and raising a family to intervene in Commission proceedings.

In fairness, certain conservation programs involve a minimal or no transfer of wealth and are thus easy to justify. For example, improving the efficiency of government buildings potentially benefits all taxpayers, and thus, the same people pay for and benefit from the project.²¹ In programs designed for low-income electric consumers, the transfer of wealth may itself be a valid objective, and in light of Maine's statewide assistance program, reducing consumption by this group may actually result in savings for all ratepayers.

One way of addressing the distributional equity issue is by requiring, as the Conservation Act endeavors to do, that the benefits be spread among the different classes of ratepayers. While this may limit the problem, it does not eliminate the question of whether and under what circumstances this transfer of wealth is justified, especially if one is unable to demonstrate that the programs are really the best way to achieve other social goals. Before we spend other people's money, we have an obligation to fully answer that question, and I look forward to doing so when we consider the permanent conservation programs.²²

²⁰ The possibility that some of these programs might someday be seen as boondoggles is enhanced by the fact that the All Ratepayers Test only allows projects with savings greater than costs. Thus, we are transferring wealth to subsidize measures which, even without the subsidy, would benefit the participants.

²¹ To the extent that a conservation assessment is a more regressive way to raise money than the income tax, there is the question of why we should use the former to achieve savings in the latter. This arises because at the State level, the assessment would be used for the conservation measure while the electricity bill is paid with tax dollars.

²² It may be argued that by passing the Conservation Act, the Legislature answered this question. The Act, however, gives the Commission extremely broad discretion in deciding cost effectiveness and determining the amount to spend on conservation, and I believe the issues raised in this opinion should be addressed if we are to carry out those tasks in a thoughtful manner. Alternatively, we might decide to raise these issues with the Legislature if we conclude we need clearer guidance on how it would like us to proceed.